Serial No. 10/566,389 Amendment dated Mar. 26, 2009 Reply to OA of Dec. 26, 2008

IN THE CLAIMS

- 1-19. (Cancelled)
- 20. (Currently Amended) A process for removing a solvent from a first solution, said process comprising:
- (a) positioning a first selective membrane between the first solution and a second solution having a higher osmotic potential than the first solution, such that liquid solvent from the first solution passes across the first membrane to dilute the second solution by direct osmosis, and
- (b) placing the diluted second solution on one side of a nanofiltration membrane and applying a pressure differential of at least 7 MPa across the nanofiltration membrane to cause liquid solvent from the diluted second solution to flow across the nanofiltration membrane, wherein the second solution contains solute species that are too large to pass through pores of the first selective membrane and the nanofiltration membrane, and contains an additive selected from the group consisting of anti-scaling agents, corrosion inhibitors, anti-fouling agents and disinfectants.
- 21. (Currently Amended) The process as claimed in claim 20, wherein the nanofiltration membrane is suitable for the separation of components that are 0.001 to 0.01 mircrons in size.

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22. (Previously Presented) The process as claimed in claim 20, wherein the second solution is prepared by introducing a known quantity of solute into a known quantity of solvent.

- 23. (Previously Presented) The process as claimed in claim 20, which comprises dividing the diluted second solution from step (a) into a first portion and a second portion, extracting solvent from the first portion by passing the first portion through the nanofiltration membrane of step (b), and extracting solvent from the second portion by crystallization and/or distillation.
- 24. (Previously Presented) The process as claimed in claim 23, wherein the residue from the nanofiltration step (b) is treated by a crystallization and/or distillation technique.
- 25. (Previously Presented) The process as claimed in claim 24, wherein the crystallization and/or distillation technique is selected from multi-flash distillation, multi-effect distillation, mechanical vapour compression, MED-thermo compression and rapid spray distillation.
- 26. (Currently Amended) The process as claimed in claim 20, wherein the second solution is an aqueous solution and said solute species is selected from of the group consisting of MgSO₄·6H₂O, MgSO₄·7H₂O, MgCl₂·6H₂O, Na₂SO₄·10H₂O, $\frac{\text{CaCl}_2 \cdot 2\text{H}_2O}{\text{CaCl}_2 \cdot 2\text{H}_2O}$, CaCl₂·6H₂O,

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potassium alum. 24H₂Opotassium alum·24H₂O, potassium chloride,

 $Na_2HPO_4\cdot 12H_2O$, glucose, fructose and sucrose.

(Previously Presented) The process as claimed in claim 20, wherein 27.

the solvent of the second solution is the same as the solvent of the first

solution.

(Previously Presented) The process as claimed in claim 20, wherein 28.

the solvent of the second solution is water.

29. (Currently Amended) The process as claimed in claim 2026,

wherein the first solution is waste stream from an industrial or agricultural

process or a domestic water stream.

30. (Previously Presented) The process as claimed in claim 20, wherein

the first solution is a saline solution.

31. (Previously Presented) The process as claimed in claim 30, wherein

the saline solution is seawater or brackish water.

32. (Previously Presented) The process as claimed in claim 20, wherein

an elevated pressure induced in the second solution by influx of solvent

from the first solution is used to assist in the extraction of solvent from

the second solution.

(Previously Presented) The process as claimed in claim 20, wherein 33.

after solvent from the first solution passes across the membrane to dilute

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the second solution, the diluted second solution is contacted with one side

of a further selective membrane and a further solution having a higher

osmotic potential than the diluted second solution is contacted with the

other side of the membrane, such that solvent from the diluted second

solution passes across the membrane to dilute the further solution.

34. (Currently Amended) The process as claimed in claim 20, wherein

the second solution contains an additive in the second solution is selected

from the group consisting of anti-scaling agents, corrosion inhibitors, anti-

fouling agents and disinfectants.

35. (Previously Presented) The process as claimed in claim 34, wherein

said second solution is circulated in a closed loop, such that said additives

are reused.

36. (Previously Presented) The process as claimed in claim 20, wherein

the selective membrane of step a) has an average pore size of 5 to 50

Angstroms.

37. (Previously Presented) The process as claimed in claim 20, wherein

the selective membrane has an average pore size of at least 10

Angstroms and the second solution contains solute species that are too

large to pass through pores of the membrane.

38. (Previously Presented) The process as claimed in claim 37, wherein

the solute species in the second solution comprises at least one cationic

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species and/or at least one anionic species that is larger than an average

pore size of the nanofiltration membrane.

39. (Previously Presented) The process as claimed in claim 20, wherein

the solvent extracted from the second solution comprises water, and said

water is used to pump oil from oil wells.

40. (Previously Presented) The process as claimed in claim 20, wherein

the solution on either side of the first selective membrane is heated to a

temperature of up to 80°C.

41. (Previously Presented) The process as claimed in claim 20 ,wherein

liquid solvent is extracted from the diluted second solution of step (b) by

two or more sequential nanofiltration steps.